

## **REMARKS**

Claims 1-157 are pending in the application. Claims 1-65, 72 and 91 have been cancelled. Claims 106-152 have been withdrawn. Claims 153-157 are new.

### **Examiner Interview**

The undersigned, inventor Angus Campbell, and Examiners Michael Hobbs and William Visner conducted a telephone interview on September 17, 2009. During the interview, U.S. Patent No. 5,534,042 to Tsuchida (“Tsuchida”) and U.S. Patent No. 3,554,454 to Gruendler (“Gruendler”) were discussed. The distinctions of the present claims over Tsuchida and Gruendler were discussed. Examiner Hobbs noted that the proposed amendment to claim 66, viz., that the one or more cantilevered bars, blades or cutting plates mounted on the rotatable shaft and the one or more fixed bars, blades or cutting plates extending from the side wall(s) overlap so as to create a shearing action distinguishes amended claim 66 over Tsuchida and Gruendler.

The feature that the fixed bars, blades or cutting plates extend across the vessel and have first and second ends thereof mounted to the sidewall(s) was also agreed to be distinguishable over Tsuchida and Gruendler, and new claims 153 and 154 are included in this amendment to cover this feature. It was also agreed that the rotatable shaft that is mounted at both end walls also distinguished over Tsuchida and Gruendler. This feature is now recited in dependent claims 155 and 157.

The undersigned, on behalf of inventor Angus Campbell, wishes to thank the Examiners for the courtesies extended and helpful commentary offered by the Examiners during the interview.

### **Claim Rejections – 35 U.S.C. § 112**

Claims 66-71, 73-90 and 92-105 were rejected under 35 U.S.C. § 112. Specifically, the Office Action asserts that the term “exothermic” is not supported by the original disclosure and therefore constitutes new matter. Responsive thereto, Applicants submit that a person of ordinary of skill in the art would understand that composting is, by its very nature, an exothermic process, such that the term “exothermic” need not be explicitly mentioned in the specification to

support this claim element. Nonetheless, for the sake of expediting prosecution of the application, Applicants have amended claim 66 to delete the term “exothermic.”

### **Claim Rejections – 35 U.S.C. § 103**

Claims 66, 68, 72-73, 75, 81, 85, 89, 93-96, 102 and 104-105 were rejected as obvious over U.S. Patent No. 5,534,042 to Tsuchida (“Tsuchida”) in view of U.S. Patent No. 3,554,454 to Gruendler (“Gruendler”).

As noted in the previous response, Applicants submit that Tsuchida does not teach true composting technology. Little or no biological processing is possible with the process disclosed by Tsuchida. Further, Tsuchida does not disclose the recited size reduction means comprising one or more cantilevered bars, blades or cutting plates rigidly mounted on a rotatable shaft and rotatable with the shaft, and one or more fixed bars, blades or cutting plates mounted on and extending from the side wall(s), wherein the rotatable and fixed bars, blades or cutting plates overlap and co-operate together to create a shearing action so as to reduce the size of the waste material as said waste material passes through said size reduction means.

Instead, Tsuchida teaches directly heating the mass of material via a heated thermal jacket. Temperature is regulated to evaporate moisture. The temperature range of the mass is raised above 65 degrees Celsius, which is above the temperature range at which the biological organisms responsible for composting are destroyed or rendered inactive. The Tsuchida process is described as “dehydrating and drying” (see Abstract). The rotation action is described as “it is desirable to constitute the pulsator so that the pulsator splashes the garbage from the centre of the treatment tank to the outside.” This is akin to a kitchen blender mechanism that must operate at high rotational speeds, and it is clear to anyone skilled in the art that above a certain volume, this is simply not mechanically feasible.

In contrast, the present invention regulates air to support prolific biological activity via aerobic decomposition (i.e., composting). This process is implicitly exothermic, thereby generating heat. Temperature is not regulated directly; temperature is a function of biological activity which is regulated by supply of air. The present invention is low speed, high torque, as this is essential for the zone of size reduction that makes the invention unique. The combination of multiple rigid fixed blades mounted from wall to wall across the vessel, and multiple overlapping rotating blades mounted to the rotating central shaft forms a zone of size reduction

through which all materials must pass. This structural relationship is unique, it is particularly specified in independent claim 66, and it cannot be inferred from any aspect of the individual prior art references cited by the Examiner, either alone or in combination.

Like Tsuchida, Gruendler also does not disclose a composting technology; little or no biological processing is disclosed. Further, Gruendler does not disclose the claimed size reduction means comprising one or more cantilevered bars, blades or cutting plates rigidly mounted on said rotatable shaft and rotatable with said shaft, and one or more fixed bars, blades or cutting plates mounted on and extending from said side wall(s), wherein said rotatable and fixed bars, blades or cutting plates overlap and co-operate together to create a shearing action so as to reduce the size of the waste material as said waste material passes through said size reduction means.

Gruendler discloses a technology that is specifically identified as a separation technology for size reducing and grading (amongst other things) finished compost. This is specifically and explicitly not a composting technology. This is a high (“ballistic”) speed rotating hammermill that smashes materials into smaller pieces until small enough to fit through the mesh screen to be hurled from the unit. This is no different than the countless hammermill mechanism technologies on the market, except that the Gruendler device has some textured plates mounted to the inside of the vessel to aid in the smashing of materials against a rough surface. This is not a composting unit, and is a fundamentally different size reduction action to the instant application. Gruendler is explicitly not a composting technology.

Applicants submit that neither Tsuchida nor Gruendler disclose a size reduction means of the type defined in amended claim 66. It is important to note that the bars, blades or cutting plates mounted on the rotatable shaft and the side wall(s) overlap and cooperate together to create a shearing action, so as to reduce the size of the waste material as the waste material passes through the size reduction means. The combination of Tsuchida and Gruendler simply fails to consider Applicants’ claim limitations covering this inventive arrangement. See In re Fine, 837 F.2d 1071, 1075 (Fed. Cir. 1988) (Board erred by failing to appreciate that the applicant’s claims can be distinguished over the cited references). Further, a skilled artisan would not modify Tsuchida or Gruendler to obtain Applicants’ claimed invention because these prior art references do not teach composting like Applicants, they operate at higher speeds, and they are applied to smaller volumes.

### **New Claims**

Applicants have added new claims 153-157. Claims 153 and 154 recite that the fixed bars, blades or cutting plates extend across the interior vessel space and are mounted at each end to the side wall(s) of the vessel. As discussed during the interview, neither Tsuchida nor Gruendler, alone or in combination, suggests this inventive feature. Claims 155 and 157 are dependent claims that require that the rotatable shaft is mounted to both end walls. As also discussed during the interview, neither Tsuchida nor Gruendler disclose this feature. Applicants earnestly solicit allowance of these claims.

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## CONCLUSION

Applicants submit that all pending claims are allowable, and earnestly solicit allowance thereof.

In the event that there are any questions related to this response or the application in general, the undersigned would appreciate the opportunity to address those questions directly in a telephone interview to expedite the prosecution of this application.

If necessary, Applicants request that this response be considered a request for an extension of time for a time appropriate for the response to be timely filed. Please charge any fees that may be due in connection with this Response to Bose McKinney & Evans LLP's Deposit Account No. 02-3223.

Respectfully submitted,

BOSE McKINNEY & EVANS LLP

A handwritten signature in black ink, appearing to be 'Michael C. Bartol', written over a horizontal line.

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